## III. REMARKS

Claims 1, 3-4, 7-12, 14-15, 17-18, and 20-23 are pending in this application. By this Amendment, claims 8, 14, 17, and 20 have been amended. Claims 2, 5-6, 13, 16, and 19 have previously been cancelled. Applicants do not acquiesce in the correctness of the rejections; the present claim amendments are only for facilitating expeditious allowance of the claimed subject matter. Applicants respectfully reserve the right to pursue these and other claims in one or more continuation and/or divisional patent applications. Reconsideration in view of the following remarks is respectfully requested.

## Allowable Subject Matter

In the Office Action, claims 1, 3-4, 7, 21, and 22 are noted to be allowable. Applicants appreciate this indication of allowable subject matter.

## Rejections under 35 U.S.C. § 101

In the Office Action, claims 8, 10-12, 14-15, 17-18, 20, and 23 are rejected under 35 U.S.C. § 101, as allegedly being directed to non-statutory subject matter.

With regard to claim 8, which is drawn to a method, Applicants have amended this claim herein to recite "a <u>computer implemented</u> method for transmitting a nucleotide chain sequence, wherein the nucleotide chain sequence comprises at least a portion of a genome of an organism, the method comprising: <u>on a computer hardware apparatus</u>, identifying..." (claim 8). No new matter is added by this amendment, as support may be found in the specification as filed in at least p. 7, line 18 through p. 8, line 10. Applicants respectfully submit that claim 8 as presented herein "require[s] use of a machine within the steps of the claimed subject matter" (Office Action, pp. 2-3), specifically a computer hardware apparatus. Accordingly, claim 8 does not

merely comprise mental steps and "insignificant extra-solution activity," but rather, "explicitly require[s] that the steps of the claimed method are performed on a machine" (Office Action, p. 3). Accordingly, Applicants respectfully submit that claim 8 recites patentable subject matter. With regard to claims 10-12 and 23, which depend from claim 8 and incorporate the above-described features, Applicants submit that these claims are also patentable for the same reasons.

With regard to claim 14, which is drawn to a program product, Applicants have amended this claim herein to recite a "program product stored on a recordable medium comprising instructions executable by a computer system that when executed, cause the computer system to implement a method for encoding a nucleotide chain sequence, wherein the nucleotide chain sequence comprises at least a portion of a genome of an organism, the method comprising..."

Explicit support for these amendments may be found in the specification as filed in at least p. 7, line 18 through p. 8, line 10. Applicants respectfully submit that claim 14 as presented herein recites statutory subject matter, because it recites "a computer program [] used in a computerized process where the computer executes the instructions set forth in a computer program" (Office Action, p. 4 (quoting MPEP 2106.01)), as requested by the Office.

With regard to claim 17, which is also drawn to a program product, Applicants have amended this claim analogously to claim 14, reciting a "program product stored on a recordable medium comprising instructions executable by a computer system that when executed, cause the computer system to implement a method for decrypting an encrypted nucleotide chain, wherein the nucleotide chain sequence comprises at least a portion of a genome of an organism, the method comprising..." (claim 17). Explicit support may be found for these amendments in the specification as filed in at least p. 7, line 18 through p. 8, line 10. With regard to dependent

claims 15, 18, and 20, which depend from claims 14 and 17, Applicants submit that these claims are allowable for at least the reasons given above relative to claims 14 and 17.

In view of at least the above amendments and remarks, Applicants respectfully submit that all rejections under § 101 have been obviated.

## Rejections under 35 U.S.C. § 112, Second Paragraph

In the Office Action, claims 14-15, 17-18, and 20 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Claim 17 is rejected as lacking antecedent basis for the recitation of "the method" at line

3. Applicants have amended claim 17 herein such that it now recites, in relevant part, "a

program product stored on a recordable medium comprising instructions executable by a

computer system that when executed, cause the computer system to implement a method for
decrypting an encrypted nucleotide chain, wherein the nucleotide chain sequence comprises at
least a portion of a genome of an organism, the method comprising..." (claim 17 as currently
amended (emphasis added)). Applicants respectfully submit that this amendment, support for
which is discussed above, includes proper antecedent basis for "the method." Accordingly,
Applicants respectfully request withdrawal of the rejection under § 112, 2nd paragraph to claim
17, as well as claims 18 and 20 which depend therefrom.

Claims 14 and 17 are rejected as being unclear as to whether Applicants' use of "means for" is intended to invoke § 112, Sixth Paragraph. Applicants have amended claims 14, 17, and 20 herein to delete "means for" from the claims, and respectfully submit that in view of these amendments, claims 14 and 17 are sufficiently clear.

In view of at least the above amendments and remarks, Applicants respectfully submit

that all rejections under § 112 have been obviated, and that all pending claims are allowable.

IV. CONCLUSION

Applicants respectfully submit that the Application as presented is in condition for

allowance. Should the Examiner believe that anything further is necessary in order to place the

application in better condition for allowance, the Examiner is requested to contact Applicants'

undersigned attorney at the telephone number listed below.

Respectfully submitted,

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